

Pollution Prevention Audit



Target Level:
K-6

SOLs:
Science: K.10, 1.8, 2.8, 3.11,
4.8, 6.11

Materials needed:
Copy(s) of the P2 Assessment
for Our School form

Time Needed:
One class period

Summary

Students will participate in an investigation of wastes produced in a school environment and suggest ways to decrease them through an audit process.

Objectives

Students will be able to identify and reasonably quantify a variety of wastes found in a school setting, determine where and how the wastes are generated and their origins as raw materials, target “problem” waste flows, and consider pollution prevention (P2) or waste reduction solutions.

Background

Pollution prevention is a way that manufacturing facilities can reduce wastes by maximizing raw material use and minimizing the leftovers. You may not think of schools as producing much pollution, but they also have room for improvement in waste reduction and energy conservation. One simple example is found in the volume of paper that is used and disposed of in a school. Other examples of materials and energy students and teachers use everyday are also important to consider. Here are some suggestions for schools to conserve energy and prevent pollution:

- Use energy efficient lights and heat, and turn them off when not needed.
- Install high-pressure/low-volume water faucets and shower-heads.
- Use hot-air hand dryers instead of paper towels.
- Install low-volume toilets.
- Replace cleaners with less toxic alternatives.
- Provide recycling bins for aluminum, glass, plastic, and paper.
- Save paper by using 2-sided copying, and reuse mistakes as scrap or draft paper.

The term “audit” refers to a way to “account” for the flow or use of raw materials in a given facility. A pollution prevention auditor develops an inventory of waste-producing activities and characterizes the use of the raw materials. By quantifying wastes and figuring out why they are generated, the P2 auditor can identify problem areas and suggest ideas for reducing them.

Inventory + Asking Questions + Brainstorming + Research = P2 Solutions

Procedure

1. Schools can start preventing pollution by taking an inventory of the places and activities which may be creating waste. Here are some suggestions of where to look:

PLACES	MORE PLACES	ACTIVITIES
Cafeteria Green House Offices Gymnasium Locker Rooms Vending Machines Copy Rooms	Laundry Room Shop Outdoor Areas/ Playground Bathrooms Student Areas Classrooms Parking Lots	Heating Air Conditioning Water Use Landscaping Housekeeping Cleaning Lighting Energy Use Construction

2. Ask students whether they think P2 measures are already being used.
3. Invite possible pollution prevention solutions.

Wrap Up/Assessment

As a group, or individually, have students name a particular Place or Activity and fill out the following chart. This will also help in their making the connection between the raw materials *being used* and the waste *being generated*.

Extension

This activity could easily lend itself to presentation materials and opportunity to share with other classes, the principal, PTA, or local school board.

Pollution Prevention Assessment for Our School

Student Names: _____

PLACE or ACTIVITY: _____

☐ Types of waste found: _____

Quantity: _____

☐ Why are wastes produced? _____

☐ Types of raw materials used: _____

Quantity: _____

☐ Disposal costs/Raw materials: _____

Solid Waste: \$ _____

Hazardous Waste: \$ _____

Wasted Raw Materials: \$ _____

☐ Types of energy efficient fixtures and appliances: _____

☐ Are any P2 measures already being used? _____

☐ P2 ideas? _____
